

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application.

**COMPLETE LISTING OF THE CLAIMS:**

Claims 1-3 : (Canceled)

Claim 4 : (Currently Amended) A phase detector for use over a temperature range, comprising: at least two series-connected diodes; a repeating coil for feeding a reference signal to the diodes; a decoupling network via which an input signal is placed on the diodes, and an output signal having a temperature-dependent drift is tapped off the diodes; and adjustable reactances between the diodes and the repeating coil for balancing respective voltages on the diodes over the temperature range, and for minimizing the temperature-dependent drift of the output signal during changes in ambient temperature, the reactances having planar line structures whose dimensions are changed by laser evaporation to adjust the reactances.

Claim 5 : (Previously Presented) The phase detector according to claim 4, wherein the decoupling network includes resistors and capacitors.

Claim 6 : (Previously Presented) The phase detector according to claim 4, and working resistors connected in series with the diodes, both working resistors being connected together at a connection point with a fixed potential, and feed lines between the repeating coil and the diodes, each feed line having at least one of the reactances therein and being connected between a respective diode and a respective working resistor.

Claim 7 : (Previously Presented) The phase detector according to claim 4, wherein the reactances are capacitors.

Claim 8 : (Previously Presented) The phase detector according to claim 4, wherein the reactances are inductors.

Claim 9 : (Previously Presented) The phase detector according to claim 4, wherein the reactances are capacitors and inductors.

Claim 10 : (Previously Presented) The phase detector according to claim 4, wherein the repeating coil is adjustable for balancing the voltages on the diodes.

Claim 11 : (Previously Presented) The phase detector according to claim 4, wherein the repeating coil is a transformer.

Claim 12 : (Previously Presented) The phase detector according to claim 6, wherein the fixed potential is ground.